

UPC 1000 Prime-Seal

Product Description

UPC 1000 (Prime-Seal) is a two component, high performance cycloaliphatic epoxy concrete floor sealer or primer. UPC 1000 provides a durable, high gloss finish which beautifies concrete for years. Its epoxy chemistry provides excellent bonding characteristics and its low viscosity allows for deep penetration into a concrete substrate. It is generally applied at 12-16 mil as a sealer and is applied at 4-8 mil as a primer. Its design features provide for the highest industrial and commercial demands.

ADVANTAGES:

- Low odor
- Self-priming
- High gloss
- Withstands heavy traffic
- Chemically resistant
- No amine blush
- VOC compliant
- Seals rough concrete

Applications

The uniqueness and universality of its chemistry allows Prime-Seal to be used in the following applications:

- Manufacturing
- Aerospace
- Food preparation
- Power plants
- Electronic plants
- Warehouses
- Aisle ways
- Clean rooms
- Automotive
- Schools
- Docks

Colors

UPC 1000 is available in clear only. Note: Generally, clear sealers look good on new concrete or concrete in good condition only. Discoloration, stains and patches on older concrete show through clear sealers.

Packaging

UPC 1000 is available in two different kit sizes:

	Part A	Part B
3 Gallon Kit	2 gal.	1 gal.
15 Gallon Kit	10 gal.	5 gal.

Physical Properties

PROPERTY	VALUE	REFERENCE
Compressive Strength	7,800 psi	ASTM C 579
Flexural Strength	3,700 psi	ASTM D 790
Tensile Strength	3,900 psi	ASTM D 638
Bond to Concrete	350 psi	ASTM D 4541
	Concrete fails at this point	
Taber Abrasion	75-80 Mgs	ASTM D 4060 CS 17 Wheels
Flammability	Self-Extinguishing	
Hardness, Shore D	84	ASTM D 2240
Flash Point	>200°F	

Product Data

Volumetric Ratio:	2 to 1
Solids:	100% (+ or - 1%)
Coverage:	100 SF/gal. (16 mil) 135 SF/gal. (12 mil) Topcoat – 125-150 SF/gal.
Application temperature:	65-90°F
Thinning:	Not required
Pot life:	10-15 minutes
Working time on floor:	20-30 minutes
Cure time:	10 hours (walking) 24 hours (traffic)
Critical recoat time:	24 hours
Shelf life:	12 months

Concrete Preparation

Before coating is applied, concrete must be:

- Dry – No wet areas
- Clean – Contaminants removed
- Profiled – Surface etched
- Sound – All cracks and spalled areas repaired

Mechanical preparation is the preferred method of preparing concrete for coating application. Shot-blasting, diamond grinding, scarifying and scabbling are all acceptable methods.

Patching

Voids, cracks and imperfections will be seen in finished coating if the concrete is not patched correctly. Patch concrete with UPC Perfect Patch. After the patching material is cured, diamond grind patch. If a non-UPC patching material is used, contact a UPC technical representative for a compatible and approved alternative.

Testing

All surfaces are not the same. It is recommended that a sample area be done before the start of the project. The test should be done on-site, using the proposed method by the assigned applicator to insure proper adhesion and color. A sample area should also be done on any existing coatings to determine if any contaminants exist or if delaminating will occur.

Mixing

The ratio of UPC 1000 is 2 to 1. That is, two parts A (resin) to one part B (hardener). Generally, three mixed gallons of UPC 1000 is ideal for application. Mix the following with a drill and mixing paddle. Note: If using a drill mixer, use a low speed (not to exceed 300 rpm) to prevent air entrapment.

1. Part A does not require pre-mixing. If using the 15 gallon kit, pour out 2 gallons into an empty 5 gallon bucket which then becomes the mixing bucket. (The three gallon kit allows the Part A bucket to be used as the complete mixing bucket.)
2. Add one gallon of part B and mix for 60-90 seconds.
3. Immediately apply to the floor. Prime-Seal in mass has a short pot life of approximately 15-20 minutes. Once poured out on the floor, 20-30 minutes of working time can generally be expected.

Application Instructions

Application of UPC 1000 for a nominal 12-16 mil is applied in two coats. The following is for a 16 mil system:

1. Always apply in descending temperatures. Concrete is porous and traps air. In ascending temperatures (generally mornings), the air expands and can cause out gassing in the coating. It is safer to apply coatings in the late afternoon, especially for exterior applications
2. Optimum ambient temperature should be between 65-90°F during application.
3. Mix three gallons of resin using above mixing instructions.
4. Apply approximately 200 S/F per gallon by immediately pouring out on surface in a ribbon, while walking and pouring at the same time until bucket is empty.
5. Using a window squeegee on a pole, pull Prime-Seal over substrate. As a first coat over bare concrete, pull resin as thin as possible while still wetting out concrete and uniformly covering surface. This allows trapped air to escape more easily.
6. Using a 3/8" non-shedding plastic core paint roller, roll coating forward and backward. Then backroll in the opposite direction.
7. Apply second coat by repeating steps 1-6 the following day.

Clean-up

UPC 1000, while in an un-reacted state, may be cleaned up with water and degreaser. Isopropyl alcohol or acetone may be needed once the resin begins hardening. Lastly, a strong solvent like methylene chloride may be required if resin is nearly set up.

Product Limitations

Ground level concrete slabs emit invisible moisture vapor. The allowable moisture emissions for concrete are 3 lbs / 1,000 SF over a 24 hour period. If moisture is above this level, then blistering and delamination of coating may occur. A calcium chloride test should be performed to determine concrete moisture level. If moisture levels exceed the 3 lb. limit, a concrete moisture vapor control system should be used first before applying coating system. Please contact the UPC technical department for approved systems.

Coating systems are susceptible to cracking if the concrete moves or separates below the coating. Hence, joint and crack treatment should be reviewed prior to coating application. As a general rule, control joints (saw cuts) and random cracks should be saw cut or chased first then filled with Perfect Patch or similar approved hard epoxy product. Construction joints (two slabs which meet and hence move) should be treated. After the coating has been applied and cured, saw cut through the coating over construction joints and apply an elastomeric caulking.

Warranty

Universal Polymer Coatings products are warranted for one year after date of application. Please refer to the UPC Limited Material warranty for additional clarification.

Safety

Consult UPC 1000 material safety data sheet. Avoid UPC 1000 contact with skin. Some individuals may be allergic to epoxy resin. Protective gloves and clothing are recommended.